SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

FACILITY PERMIT TO OPERATE

EASTERN MUNICIPAL WATER DISTRICT
17140 KITCHING ST
MORENO VALLEY, CA 92551

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By for Carol Coy
Deputy Executive Officer
Engineering & Compliance

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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Permit to Construct and Temporary Permit to Operate
(Section H)

This section consists of a table listing all individual Permits to Construct issued to various equipment at the facility. Each permit will list operating conditions, including periodic monitoring requirements and applicable emission limits and requirements. Also included are the rule origin and authority of each emission limit and permit condition.

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PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AT THIS FACILITY:

Application number	Equipment Description	Page Number
446530	FLARE, ENCLOSED LANDFILL/DIGETER GAS	3
455648	SEWAGE TREATMENT (> 5 MG/D) ANAEROBIC	7
473542	DIGESTER GAS TREATMENT SYSTEM W/ FUELCELL	11

NOTE: EQUIPMENT LISTED ABOVE ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT WILL NOT BE FOUND IN THIS TITLE V PERMIT.

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GRANTED AS OF: November 23, 2005

A/N 446530

Equipment Description:

DIGESTER GAS FLARING SYSTEM CONSISTING OF:

1. ONE (1) ENCLOSED FLARE, JOHN ZINK, MODEL ZTOF, 18,000,000 BTU/HR, 5'-0" DIA. X 50'-0" H.
2. NATURAL GAS PILOT SYSTEM WITH ELECTRIC IGNITION.
3. ULTRA-VIOLET FLAME DETECTOR.
4. KNOCKOUT VESSEL.
5. ONE (1) COMBUSTION AIR BLOWER, ¾ H.P.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. AT LEAST TWO (2) SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST ONE-HALF DUCT DIAMETER UPSTREAM OF THE FLARE OUTLET, 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR-INCH COUPLING WITH PLUG. ALL PORTS SHALL BE PROPERLY CENTERED. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED WITHIN 48 HOURS NOTICE BY SCAQMD.
   [RULE 1303]

5. A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE FLARE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE.
   [RULE 1303]

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6. THE FLARE SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND A RECORDING DEVICE WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE MEASURED AT A LOCATION ABOVE THE FLAME ZONE, AT LEAST 0.6 SECOND DOWNSTREAM OF THE BURNER AND NOT LESS THAN FIVE (5) FEET FROM THE TOP OF THE STACK.
[RULE 1303]

7. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F, AS MEASURED BY AN APPROVED TEMPERATURE INDICATOR, SHALL BE MAINTAINED IN THE FLARE STACK.
[RULE 1303]

8. THE FLARE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-DOWN SYSTEM WITH A FAILURE ALARM, WHICH HAS BEEN APPROVED BY THE SCAQMD, TO AUTOMATICALLY ISOLATE THE FLARE FROM THE DIGESTER GAS SUPPLY LINE, SHUT OFF THE BLOWER AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN.
[RULE 1303]

9. THE AUTOMATIC SHUT-DOWN SAFETY SYSTEM SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
[RULE 1303]

10. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BEING BURNED IN THE FLARE.
[RULE 1303]

11. THE TOTAL VOLUME OF DIGESTER GAS BURNED IN THE FLARE SHALL NOT EXCEED 480 STANDARD CUBIC FEET PER MINUTE.
[RULE 1303]

12. THE HEAT INPUT THROUGH THE FLARE SHALL NOT EXCEED 18 MILLION BTU'S PER HOUR.
[RULE 1303]

13. WEEKLY READINGS OF BTU CONTENT OF THE GAS AT THE INLET TO THE FLARE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 1303]

14. ALL DIGESTER GAS COLLECTED SHALL BE DIRECTED EITHER TO THE FLARE FOR COMBUSTION OR TO A TREATMENT FACILITY WHICH HAS A VALID PERMIT TO CONSTRUCT OR OPERATE, AS APPLICABLE, FROM THE SCAQMD.
[RULE 1303]

15. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 1303]

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16. THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT WITHIN THE FLARE AT ALL TIMES. THE VIEW PORTS SHALL BE LOCATED AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS. SAFE AND ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS UPON REQUEST BY SCAQMD PERSONNEL.
[RULE 1303]

17. THE FLARE SHALL BE DESIGNED AND OPERATED SO THAT THE FLAME IN THE FLARE REMAINS BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
[RULE 1303]

18. THE MAXIMUM FLARE SKIN TEMPERATURE AT ANY LOCATION SHALL NOT EXCEED 250 DEGREES F.
[RULE 1303]

19. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF ANY RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF PUBLIC FACILITIES BRANCH WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 1303]

20. WITHIN 180 DAYS OF INITIAL START-UP, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER TESTING. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST SIXTY (60) DAYS PRIOR TO THE START OF TESTS.

THE TEST SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

A. METHANE
B. TOTAL NON-METHANE ORGANICS
C. OXIDES OF NITROGEN (EXHAUST ONLY)
D. CARBON MONOXIDE (EXHAUST ONLY)
E. TOTAL (PM10) PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED)(INLET ONLY)
H. CARBON DIOXIDE
I. TOXIC AIR CONTAMINANTS INCLUDING, BUT NOT LIMITED TO, ACETYLENE, ACROLEIN, BENZENE, CHLOROBENZENE, CHLOROFORM, DICHLOROBENZENE, 1,2-DICHLOROETHANE, FORMALDEHYDE, TETRACHLOROETHYLENE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHYLENE, VINYL CHLORIDE, AND XYLENE ISOMERS (EXHAUST ONLY)
J. OXYGEN
K. NITROGEN

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L. MOISTURE CONTENT
M. TEMPERATURE
N. FLOW RATE
O. BTU VALUE
[RULE 1303]

21. APPLICANT SHALL PERFORM A FULL RISK ASSESSMENT ON THE EMISSIONS FROM THE FLARE WITHIN NINETY (90) DAYS AFTER REQUEST FROM THE SCAQMD IF THE SOURCE TEST RESULTS SHOW THE EMISSIONS ARE GREATER THAN THAT CALCULATED UNDER THE PERMIT TO CONSTRUCT EVALUATION.
[RULE 1303]

22. APPLICANT SHALL SUBMIT FINAL DESIGN SPECIFICATIONS AND DIMENSIONS IN SUFFICIENT DETAIL TO DEMONSTRATE COMPLIANCE WITH FOLLOWING REQUIREMENTS. FOLLOWING SUBMITTAL, WRITTEN APPROVAL OF SUCH SPECIFICATIONS AND PLANS SHALL BE OBTAINED FROM SCAQMD PRIOR TO STARTING CONSTRUCTION.

A. CONDENSATE KNOCKOUT MAKE, MODEL NO., AND EFFICIENCY.
B. BLOWER MAKE AND MODEL NO.
C. FLAME ARRESTOR MAKE AND MODEL NO.
D. FLARE MAKE, MODEL NO., DIAMETER, HEIGHT, FLOW RATE, VELOCITY, RESIDENCE TIME AT 1400 DEGREE F, COMBUSTION AIR AND TEMPERATURE CONTROL SYSTEM, AUTOMATIC NOTIFICATION SYSTEM, GUARANTEED EMISSION RATES OF NOX AND CO, AND GUARANTEED DESTRUCTION RATES OF NMHC AND TOXICS.
E. CONDENSATE FEED AND NOZZLE CONFIGURATION.
[RULE 1303]

Emissions and Requirements:

THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.1 GR/SCF, RULE 409
PM10: 0.52 LB/HR, RULE 1303
NOX: 1.08 LB/HR, RULE 1303
CO: 3.6 LB/HR, RULE 1303
VOC: 0.65 LB/HR, RULE 1303
SOX: 0.31 LB/HR, RULE 1303

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GRANTED AS OF: July 19, 2006
A/N 455648

Equipment Description:

ALTERATION OF THE EXISTING TERTIARY TREATMENT PROCESS, COVERED BY PERMIT TO OPERATE R-F44238 (SEWAGE TREATMENT FACILITY, 17.1 MGD CAPACITY), CONSISTING OF:

PRELIMINARY TREATMENT PROCESS COMPRISED OF:

1. ONE 22-MGD INFLUENT PUMP STATION VENTED TO ODOR CONTROL EQUIPMENT CONSISTING OF:
   a. THREE MECHANICAL BAR SCREENS
   b. ONE GRINDER, 4 BHP.
   c. ONE GRIT CHAMBER, 18' DIA. X 18' H.

10 MGD ACTIVATED SLUDGE (ANAEROBIC) SEWAGE TREATMENT PLANT CONSISTING OF:

1. SIX GRIT CHAMBERS, EACH 12' L. X 9' W. X 10' D.
2. EIGHT PRIMARY CLARIFIERS, EACH 65' L. X 15' W. X 10' D.
3. SIX AERATION BASINS, EACH 150' L. X 30' W. X 15' D.
4. SIX SECONDARY CLARIFIERS, EACH 88' L. X 16' W. X 10' D.
5. EIGHT SECONDARY CLARIFIERS, EACH 84' L. X 12' W. X 10' D.
6. TWO DISSOLVED AIR FLOATATION TANKS, EACH 30' DIA. X 6' D.
7. ONE INFLUENT EQUALIZATION BASIN, 150' L. X 150' W. X 15' D.

7.1 MGD BARDENPHO (ANAEROBIC) SEWAGE TREATMENT PLANT CONSISTING OF:

1. ANOXIC ZONE 1, 0.3 MG CAPACITY.
2. AEROBIC ZONE 1, 0.49 MG CAPACITY.
3. ANOXIC ZONE 2, 0.22 MG CAPACITY.
4. AEROBIC ZONE 2, 0.77 MG CAPACITY.
5. ANOXIC ZONE 3, 0.25 MG CAPACITY.
6. AEROBIC ZONE 3.1, 0.4 MG CAPACITY.
7. AEROBIC ZONE 3.2, 0.54 MG CAPACITY.
8. TWO SECONDARY CLARIFIERS, 125' DIA. X 14' H.

COMBINED SECONDARY SEWAGE TREATMENT PLANT CONSISTING OF:

1. ONE 1.69 MG SECONDARY EFFLUENT STORAGE POND, 358' L. X 344' W. X 20' D.

7.2 MGD TERTIARY SEWAGE TREATMENT PLANT CONSISTING OF:

1. TWO FLOW EQUALIZATION BASINS, WITH A TOTAL OF 2.4 MILLION GALLON CAPACITY.
2. ONE FLOCCULATION BASIN, 43,758 GALLON.
3. SIX TERTIARY FILTERS, SAND BED TYPE, EACH WITH 200 SQ. FT. SURFACE AREA.

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4. ONE CHLORINE INJECTION/SPLITTER BOX.
5. ONE CHLORINE CONTACT BASIN, 110' L. X 60' W. X 11' D.
6. ONE TERTIARY EFFLUENT PUMP STATION.
7. TWO 30-TON CHLORINE COMPRESSED LIQUID/GAS STORAGE VESSELS VENTED TO AN EMERGENCY VENTILATION AND CONTROL SYSTEM (RULE 219 (d)(9) EXEMPT).
8. TWO 30-TON SULFUR DIOXIDE COMPRESSED GAS STORAGE VESSELS VENTED TO AN EMERGENCY VENTILATION AND CONTROL SYSTEM (RULE 219 (d)(9) EXEMPT).
9. SIX TERTIARY FILTERS, SAND BED TYPE, EACH WITH 200 SQ. FT. SURFACE AREA.
10. ONE CHLORINE CONTACT BASIN, 110' L. X 60' W. X 11' D.

SEWAGE SLUDGE HANDLING AND STORAGE FACILITY CONSISTING OF:

1. FOUR FIXED ROOF ANAEROBIC DIGESTERS, 48' DIA. X 22' D.
2. ONE FIXED ROOF ANAEROBIC DIGESTER, 75' DIA. X 29' H.
3. ONE ENCLOSED, BELOW GRADE, SLUDGE HOLDING TANK, 35' DIA. X 15' D., VENTED TO ODOR CONTROL EQUIPMENT.
4. ONE DIGESTER GAS STORAGE SPHERE, 35' DIA. OR 22,449 CU. FT.
5. TWO FILTER BELT PRESSES, ENCLOSED AND ASSOCIATED POLYMER SYSTEM, VENTED TO ODOR CONTROL EQUIPMENT.
6. ONE SLUDGE OFF LOADING STATION WITH ASSOCIATED CONVEYOR SYSTEM.
7. EIGHTEEN SEWAGE SLUDGE DRYING BEDS, EACH 100' L. X 40' W. X 1' D.
8. BOILER, NATURAL GAS-FIRED, RALPH B. CARTER CO., MODEL NO. H1500C41-GX, 1.5 MMBTU/HR (RULE 219 EXEMPT).
9. TWO GRAVITY BELT THICKENERS.
10. ONE CENTRIFUGE.

TREATED SEWAGE EFFLUENT EVAPORATION/PERCOLATION STORAGE PONDS CONSISTING OF:

1. ONE 6.97 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 380' L. X 326' W. X 10' D.
2. ONE 6.87 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 382' L. X 320' W. X 10' D.
3. ONE 12.61 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 370' L. X 330' W. X 22' D.
4. ONE 12.37 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 376' L. X 320' W. X 22' D.
5. ONE 6.64 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 361' L. X 328' W. X 10' D.
6. ONE 7.02 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 373' L. X 334' W. X 10' D.
7. TWO 12.14 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 361' L. X 328' W. X 22' D.
8. TWO 12.65 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 370' L. X 331' W. X 22' D.
9. ONE 12.23 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 362' L. X 329' W. X 22' D.
10. ONE 12.01 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 359' L. X 327' W. X 22' D.
11. ONE 44.20 MG L-SHAPED EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 1,080' L. X 250' W. X 745' L. X 413' W. X 335' L. X 663' W. X 22' D.

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12. ONE 12.30 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 357' L. X 335' W. X 22' D.
13. ONE 11.99 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 363' L. X 323' W. X 22' D.
14. ONE 11.62 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 356' L. X 321' W. X 22' D.
15. ONE 15.16 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 391' L. X 363' W. X 22' D.
16. ONE 15.00 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 393' L. X 358' W. X 22' D.

STORM POND:

1. ONE STORM WATER COLLECTION POND, 324' L. X 202' W. X 8' D.

MODIFY EXISTING TREATED SEWAGE EFFLUENT EVAPORATION/PERCOLATION STORAGE PONDS BY COMBINING PONDS 1 THRU 7 TO FORM:

1. TWO 31 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, 670' L. X 375' W. X 21' D.
2. ONE 30 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 662' L. X 353' W. X 22' D.
3. ONE 31 MG EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 662' L. X 365' W. X 22' D.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THE MAXIMUM DAILY INFLUENT WASTEWATER TREATED BY THIS EQUIPMENT, ON AN ANNUAL BASIS, SHALL NOT EXCEED 17.1 MILLION GALLONS PER DAY (MGD), EXCEPT DURING WET WEATHER CONDITIONS.
   [RULE 1303]

5. HEADWORKS AND DIGESTER GAS SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL OPERATION AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE SCAQMD
   [RULE 1303]

6. ALL SLUDGE SHALL BE PIPED AND STORED IN AN ENCLOSED MANNER TO PREVENT THE RELEASE OF AIR CONTAMINANTS UNTIL AFTER IT IS DEWATERED.
   [RULE 1303]

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7. AT LEAST ONE SAMPLE OF THE TREATED DIGESTER GAS DOWNSTREAM OF THE GAS PURIFIER SHALL BE ANALYZED DAILY FOR H2S AND RECORDED. ANALYTICAL METHOD SHALL BE APPROVED BY THE EXECUTIVE OFFICER.
[RULE 431.1]

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GRANTED AS OF: March 5, 2008
A/N 473542

Equipment Description:

DIGESTER GAS TREATMENT SYSTEM AND FUEL CELL POWER PLANT CONSISTING OF:

1. KNOCKOUT TANK,
2. TWO HYDROGEN SULFIDE REMOVAL VESSELS, APPLIED FILTER TECHNOLOGY, MODEL SULFRPACK, 8'-0" DIA. X 8'-0" H., EACH WITH 24,960 POUNDS MEDIA.
3. PARTICULATE FILTER.
4. PRE-COOLER WITH DEMISTER.
5. TWO COMPRESSORS, EACH 300 SCFM, ELECTRICALLY DRIVEN.
6. GAS PRE-COOLER AND GAS RE-HEATER.
7. GAS COOLER AND DEMISTER.
8. TWO SILOXANE REMOVAL VESSELS, APPLIED FILTER TECHNOLOGY, MODEL SAGPACK, 3'-6" DIA. X 8'-0" H. BED DEPTH, EACH CONTAINING 2300 POUNDS MEDIA.
9. PARTICULATE FILTER.
10. THREE FUEL CELLS, FUEL-CELL ENERGY, MODEL DFC300MA, 900 KW TOTAL MAXIMUM POWER OUTPUT.
11. THREE HEAT RECOVERY UNITS.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL BE USED ONLY FOR THE TREATMENT/CONTROL OF DIGESTER GAS, AND THE GENERATION OF ELECTRICITY AND HOT WATER, EXCEPT WHEN NATURAL GAS IS REQUIRED AS FUEL TO MAINTAIN FUEL CELL OPERATION.
   [RULE 204]

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4. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOURS AFTER OCCURRENCE OR WITHIN ONE HOURS OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 431.1]

5. A NON-RESETTABLE TOTALIZING FLOW METER SHALL BE INSTALLED AND MAINTAINED TO MEASURE AND RECORD THE TOTAL QUANTITY OF GAS TREATED. [RULE 1303 (a)(1)][RULE 1303 (a)(4)]

6. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET GAS LINE TO THE DIGESTER GAS TREATMENT SYSTEM AND TO THE FUEL-CELL PRE-CONVERTER TO ALLOW THE COLLECTION OF DIGESTER GAS SAMPLES.
[RULE 218]

7. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE FUEL-CELL EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM, AND TWO DUCT DIAMETERS UPSTREAM. THE SAMPLING PORT SHALL CONSIST OF TWO 4 INCH WELDED NIPPLES WITH PLUGS, SET 90 DEGREES APART. AN ALTERNATE SAMPLING LOCATION OR EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON WRITTEN APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 218]

8. THE OPERATOR SHALL MEASURE THE CONCENTRATION OF TOTAL SULFUR AT THE INLET AND OUTLET OF THE DIGESTER GAS TREATMENT SYSTEM ONCE EACH QUARTER, USING METHODS APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED AND REPORTED IN PPMV AS H2S.
[RULE 431.1]

9. THE CONCENTRATION OF SULFUR COMPOUNDS MEASURED AS HYDROGEN SULFIDE (H2S) AT THE INLET TO THE FUEL CELL PRE-CONVERTER SHALL NOT EXCEED 6.1 PPMV.
[RULE 1303]

10. THE SPENT MEDIA WHICH IS REMOVED FROM THE SYSTEM SHALL BE MAINTAINED OR STORED IN CLOSED CONTAINERS PRIOR TO REMOVAL FROM THE FACILITY.
[RULE 402]

11. THE SULFUR AND SILOXANE TREATMENT MEDIA SHALL BE REPLACED AT A FREQUENCY NECESSARY TO MAINTAIN COMPLIANCE WITH THE EMISSION LIMITS IN THIS PERMIT AND TO OPERATE THE FUEL CELL IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 431.1, 1303]

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12. WITHIN 180 DAYS FROM INITIAL STARTUP, AND ANNUALLY THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER TESTING. WRITTEN NOTICE OF THE SOURCE TEST SHALL BE PROVIDED TO THE SCAQMD AT LEAST 7 DAYS PRIOR TO TESTING SO THAT AN OBSERVER MAY BE PRESENT. A PROPOSAL OF SOURCE TEST PROCEDURES AND ANALYTICAL METHODS TO BE USED SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST 60 DAYS PRIOR TO THE START OF THE TEST. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE OUTLET EXHAUST OF EACH FUEL CELL, THE RAW DIGESTER GAS, AND THE TREATED DIGESTER GAS, UNLESS OTHERWISE INDICATED BELOW. THE TEST SHALL INCLUDE THE FOLLOWING RESULTS AND PROCESS DATA:

A. METHANE CONTENT OF THE RAW AND TREATED DIGESTER GAS,

B. TOTAL NON-METHANE ORGANIC COMPOUNDS OF THE RAW DIGESTER GAS, TREATED DIGESTER GAS, AND EACH FUEL CELL EXHAUST OUTLET,

C. OXIDES OF NITROGEN, AND OXIDES OF SULFUR (FUEL CELL OUTLETS), IN PPM, AND LB/HR,

D. CARBON MONOXIDE, (FUEL CELL OUTLET), IN PPM, AND LB/HR,

E. TOXIC AIR CONTAMINANTS, INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, DICHLOROBENZENE, DICHLOROETHANE, DICHLOROETHYLENE, DICHLOROMETHANE, ETHYL BENZENE, TETRACHLOROETHYLENE, TRICHLOROETHYLENE, TOLUENE, AND XYLENE ISOMERS,

F. OXYGEN CONTENT,

G. NITROGEN CONTENT,

H. MOISTURE CONTENT,

I. TEMPERATURE OF THE REFORMER,

J. TEMPERATURE AT INLET AND OUTLET OF THE PRE-CONVERTER,

K. FLOW RATE OF THE FUEL CELL EXHAUST OUTLET,

L. TOTAL REDUCED SULFUR COMPOUNDS (RAW DIGESTER GAS AND TREATED DIGESTER GAS)

M. POWER OUTPUT OF THE FUEL CELL,

N. BTU CONTENT OF THE TREATED DIGESTER GAS,

O. FUEL UTILIZATION OF THE FUEL CELL,

P. TREATED DIGESTER GAS FEED RATE TO THE PRE-CONVERTER.

FACILITY PERMIT TO OPERATE
EASTERN MUNICIPAL WATER DISTRICT

EMWD SHALL PREPARE A RISK ASSESSMENT USING SCAQMD GUIDELINES BASED ON THE RESULTS OF THE TESTING AND SUBMIT IT WITH THE REPORT. THE RISK FROM THIS EQUIPMENT SHALL DEMONSTRATE COMPLIANCE WITH RULE 1401.
[RULE 1303][RULE 1401][RULE 431.1]

13. IF THE OPERATION OF THIS EQUIPMENT RESULTS IN ODOR COMPLAINTS, THE WORK SHALL CEASE AND MITIGATION MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. WORK SHALL NOT RESUME UNTIL THE EMISSIONS CAUSING THE COMPLIANCE IS MITIGATED AND THE APPROVAL TO RESUME WORK IS RECEIVED FROM THE AQMD.
[RULE 402]

14. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL KEEP RECORDS OF OPERATING AND MONITORING DATA, AND TREATMENT MEDIA REPLACEMENT DATES. THESE RECORDS SHALL BE MAINTAINED FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 3004]